

## REMARKS

Claims 1-6, 10-22, and 26-32 are presently pending in the application. Claims 17 and 32 have been amended to correct minor typographical errors. Claims 7-9 and 23-25 have been cancelled without prejudice. These claims were indicated to be allowable in the parent application (U.S. Appl. Serial No. 09/727,954) where they were amended to overcome the Examiner's outstanding objections. No new matter has been added and support for the amendments to the claims can be found in the specification and drawings. In view of the above amendments and argument hereinbelow, Applicants respectfully submit that these claims are now in condition for allowance.

### Claim Rejections – 35 U.S.C. § 102(e)

Claims 1-6, 10-22 and 26-32 presently stand rejected in the parent application (U.S. Appl. Serial No. 09/727,954) as being anticipated by Robinson et al. U.S. Patent No. 6,404,520 ("Robinson"). Applicants respectfully traverse this rejection and submit that Robinson fails to disclose or suggest the claimed invention.

As set forth in representative claim 1, an aspect of the present invention provides an optical communication system that compensates for polarization mode dispersion (PMD), comprising:

an optical source that transmits two or more optical signals having different optical frequency bands; and

a first optical compensator that receives the two or more optical signals *and rotates at least one polarization state of the two or more optical signals based on an error condition to compensate for PMD*. Emphasis added.

Robinson discloses a method and apparatus "for providing fault management in an optical communications system by correlating observations from PMD compensators with indicators from at least one, and preferably a plurality, of other devices." See Col. 3, lines 61 – 64. Robinson, however, fails to disclose, suggest or mention anything about rotating "at least one polarization state of the two or more optical signals *based on an error condition* to compensate

for PMD.” Robinson describes monitoring the bit error rate (BER) of an optical signal, but such BER is not used to *vary* the rotation of the polarization states of the optical signal to compensate for PMD as claimed in the present invention. Although Robinson discloses a system including a PMD compensator (PMDC 32), there is no discussion of how the PMDC 32 compensates for PMD. Robinson merely teaches that the PMDC 32 is coupled to a controller 22 that receives the “bit error rate (BER) observed at the receiver, the Q measurement obtained at the receiver, alarms or notifications from the PMD compensator along the optical path, and the optical signal-to-noise ratio as measured by the selective optical power meter tapped onto the path near the receiver.” See Col. 6, lines 40 – 45. The controller 22 will indicate a potential fiber failure based on these inputs when certain conditions are met as discussed at Col. 6, line 47 et seq. The controller 22, however, does not direct the PMDC 32 to vary the amount of PMD compensation. Neither does the PMDC 32 undertake any action to change the rotation of the polarization state as a function of an error condition. The specification of Robinson states generally that “...the PMDC 32 constantly monitors the optical signal and adjusts the delay to minimize the PMD contribution to overall dispersion.” See Col. 5, lines 14 – 17. Applicants have carefully studied Robinson and submit that there is nothing in this reference that discloses, suggests, or mentions anything about rotating the polarization state of two or more optical signals *based on* an error condition. This limitation is also present in independent claim 17. In view of the foregoing, it is respectfully submitted that independent claims 1 and 17 and those claims dependent on claims 1 and 17 are patentable over Robinson.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to AT&T Corp. Account No. 01-2745. The Examiner is invited to contact the undersigned at (201) 224-7957 to discuss any matter concerning this application.

Respectfully submitted,  
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By:

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